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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,108	05/22/2001	Akio Enomoto	791_148	9205

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BURR & BROWN
PO BOX 7068
SYRACUSE, NY 13261-7068

EXAMINER

MERCADO, JULIAN A

ART UNIT PAPER NUMBER

1745

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/863,108

Applicant(s)

ENOMOTO ET AL.

Examiner

Julian Mercado

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-- The MAILING DATE of this communication appears in the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) 17-53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-3, 5, 7-10 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 1, 4, 6, 11, 12 and 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-16, drawn to a first lithium secondary cell, classified in class 429, subclass 94.
- II. Claims 17-34, drawn to a second lithium secondary cell, classified in class 429, subclass 181.
- III. Claims 35-53, drawn to a plurality of a third lithium secondary cells, classified in class 429, subclass 160.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation and different effects. The differences are found as follows: Invention I is of a first lithium secondary cell having at least two members selected from the group consisting of the plate members, the external terminal members and the internal terminal members as being joined together for construction, e.g. via friction bonding, brazing and welding, etc. Invention II is of a second lithium secondary cell having a fixing material disposed to apply pressure for bonding the plate member, the terminal member and the elastic body at a predetermined position, the elastic body provided "to absorb impact of pressure

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application for bonding between the plate member and the terminal member”, with said “pressure application” provided for by the instant “fixing material”.

Invention III and Inventions I or II are related as combination and subcombination, respectively. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination, Invention III, lacks recitation of the plate members, external terminal members and internal terminal members being joined together for construction, or, lacks recitation of a fixing material disposed to apply pressure for bonding the plate member, the terminal member and the elastic body at a predetermined position. The subcombinations of Inventions I or II have separate utility such as stand-alone single batteries.

During a telephone conversation with Stephen Burr (via “Liz”) on August 8, 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-16. Affirmation of this election must be made by applicant in replying to this Office Action. Claims 17-53 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

Claims 1 and 6 are objected to because of the following informalities:

- a. In claim 1 at line 16, it is suggested to change “an” to --a--.
- b. Claim 6 recites the limitation "said pressure release hole" in line 4. There is insufficient antecedent basis for this limitation in the claim. It is suggested to change “said pressure release hole” to --a pressure release hole--, or, alternatively, change the dependency of claim 6 from “claim 1” to --claim 4--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 7-9, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kita et al. (U.S. Pat. 5,849,431).

Regarding independent claims 1 and 7 and dependent claims therefrom as noted, Kita et al. teaches a lithium secondary cell comprising an internal electrode body including a hollow co-

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axial cylindrical winding core [31], positive [13] and negative [14] electrodes with a separator [30] disposed therebetween, a nonaqueous electrolyte contained within the cylindrical casing [17], the cylindrical case being opened at opposing ends and sealed by electrode caps [1] on either end. (also applies to claim 5, col. 5 line 27-34, col. 6 line 57-59) The caps have plate members [20a, 21a] which seals along the casing; the caps are also provided with elastic bodies [12] which is sandwiched among the plate members and internal terminals. (also applies to claim 8, col. 8 line 39-49, col. 8 line 58-60) As the positive [20] and negative [21] terminals are electrically insulated from each other by the elastic body, it would naturally flow that the corresponding positive electrodes and negative electrodes are insulated by the elastic body, albeit indirectly. (also applies to claim 9, col. 6 line 58-60) The elastic body is of polypropylene. (applies to claim 13, col. 8 line 60) External terminal members [20, 21] protrude out of the caps to lead out currents to the outside. (col. 9 line 24-28) Internal terminal members [11] are joined by holders into connection with internal electrode body [13, 14]. (col. 7 line 3-12) The internal terminal members are, by design, joined to the plate members. (col. 7 line 3-12) The external terminal member is aluminum while the internal terminal member is copper, hence at least to this extent they are respectively of different metals. (applies to claim 14, col. 5 line 54, col. 7 line 13)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 10, 15 and 16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kita et al. as applied to claims 1, 5, 7-9, 13, and 14 above.

The teachings of Kita et al. are discussed above.

As discussed above, regarding claim 15, the external terminal member is aluminum or Al and the internal terminal member is copper or Cu.

As claims 2, 3 and 15 recite product-by-process limitations of, e.g. “produced by press processing or cold forging” for the plate members, the external terminal members and the internal terminal members, and as claim 16 similarly recites a product-by-process limitation of “forming and/or welding” for the cell case and electrode cap, these process limitation have not been given patentable weight, as the limitations do not give breadth or scope to the product claim. The claimed product appears to be the same or similar to the prior art product insofar as the plate members, external terminal members, internal terminal members, cell case and electrode cap being joined together as part of a unitary battery structure, as shown by the prior art teachings of Kita et al. In the event that any differences can be shown by the product of the product-by-process claims 2, 3 and 15, such differences would have been obvious to the skilled artisan as a routine modification of the product absent of a showing of unexpected results. *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985).

As to an electric resistivity of $10^{10} \Omega/\text{cm}$, since the elastic body in Kita et al. is of the same material as that claimed by applicant, it would naturally flow to inherently have the same electric resistivity as claimed, absent of a showing by applicant that the claimed invention

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distinguishes over the reference. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) and *In re Spada*, 15 USPQ 2d 1655 (Fed. Cir. 1990)

Allowable Subject Matter

Claims 4, 6, 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 4 and 6, the prior art of record and to the examiner's knowledge do not teach or render obvious at least to the skilled artisan the instant invention regarding a pressure release hole in a position corresponding to the central axis of the battery winding core or as part of the external terminal member. In Kita et al., the central axis of the battery is already occupied by bolt [19]. Additionally, a pressure release hole [9] is already employed and notably offset from the battery central axis. (col. 8 line 53-56, col. 10 line 1-22)

Regarding claims 11 and 12, the prior art of record and to the examiner's knowledge do not teach or render obvious at least to the skilled artisan the instant invention regarding an elastic body having two kinds of packing with different levels of hardness. The elastic body in Kita et al. is of a single material such as polypropylene. The claimed subject matter in claim 12, drawn to the deformation amount being larger than the springback amount, *inter alia*, appears to be property resulting from the elastic body having two kinds of packing with different levels of hardness.

Double Patenting

Claims 1-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9-16 and 18-27 of copending Application No. 09/819,239 (hereinafter the '239 Application). Although the conflicting claims are not identical, they are not patentably distinct from each other because the '239 Application teaches the claimed features of instant claims 1-6, anticipation being the epitome of obviousness.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 7-10 and 13-16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9-16 and 18-27 of the '239 Application in view of Kita et al.

This is a provisional obviousness-type double patenting rejection.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the '239 Application teaches the claimed features of instant claims 7-10 and 13-16. While the '239 Application does not recite an elastic body, Kita et al. for the reasons discussed above under 35 U.S.C. 102(b) and 103(a) is relied upon to teach or at least suggest an elastic body. The skilled artisan would find obvious to employ an elastic body in the '239 Application for reasons such as mutually insulating the positive and negative terminals. (col. 8 line 58-60)

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

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harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

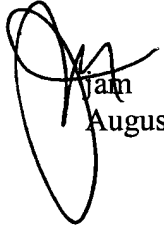
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to be "Jain", written over the typed name.

Jain
August 8, 2003

A handwritten signature in black ink, appearing to be "Patrick Ryan", written over the typed name.

Patrick Ryan
Supervisory Patent Examiner
Technology Center 1700